

Driving Deaths Down: Proven Countermeasures that Work

February 20, 2013



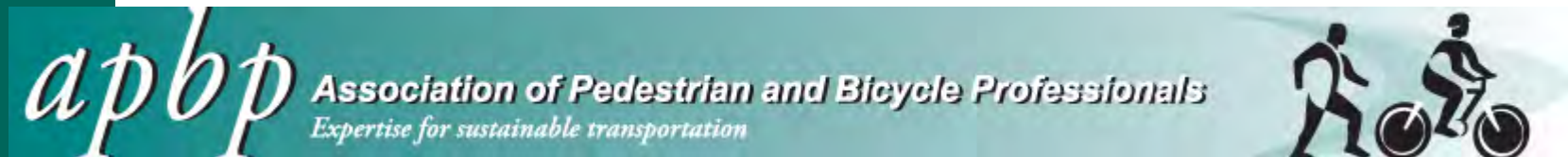
Today's webinar presenters

Jeffrey Arms, PE, AICP, Project Manager, City of Orlando, Florida

Susan Conklu, Transportation Planner, City of Scottsdale, Arizona

Steve Ramsey, Senior ITS Engineer, City of Scottsdale, Arizona

Tamara Redmon, Pedestrian Safety Program Manager, U.S. Federal Highway Administration



Today's webinar presenters

Jeffrey Arms, PE, AICP, is a Project Manager in the Capital Improvements Division of Public Works at the City of Orlando. His current responsibilities include a streetscape project, a new bus rapid transit project, reconstruction of an urban arterial to add bus-only lanes and bike lanes, several multi-use trails, and a 17-mile citywide sidewalk project.

Mr. Arms has been with the City of Orlando for over ten years. He has held positions in the Transportation Engineering and Transportation Planning Divisions of the City of Orlando, where he served as a city representative on MetroPlan Orlando's Transportation Technical Committee and their Bicycle and Pedestrian Advisory Committee, and was also responsible for development review and coordination with other agencies. Before he worked for the city, he was a project manager in the Orlando Office of HDR Engineering. In addition to his Masters in Public Administration from the University of Central Florida, Mr. Arms holds a BCE from the University of Florida. He is a member of the Institute of Transportation Engineers and the American Planning Association, a licensed Professional Engineer in Florida, a Certified Planner, and a certified Professional Traffic Operations Engineer.



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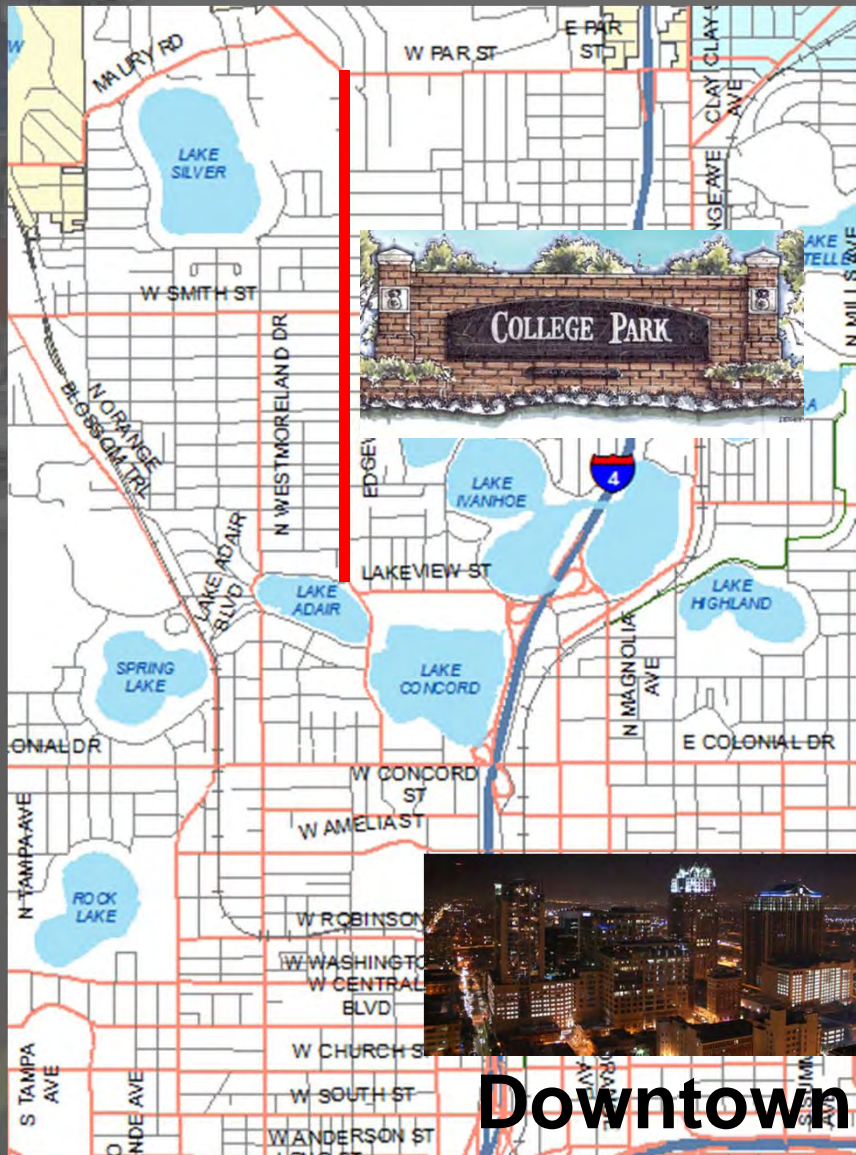


Edgewater Drive Living through the Road Diet & Celebrating Ten Years as a Thinner, Safer & more Vibrant Road



Jeffrey Arms, PE, AICP, PTOE
City of Orlando, Project Manager

Edgewater Dr - Background



- Orlando, FL – 2 miles from Downtown
 - 1.5 mile minor arterial
 - 9 Traffic Signals in a 1-mile segment (660' avg. spacing)
 - Buildings Address the Street
 - 20,000 ADT

Edgewater Dr - Background

- Edgewater Serves as the Main Street for College Park – Pre WWII Neighborhood –



Genesis of the Diet – 1999 Neighborhood Horizon Plan

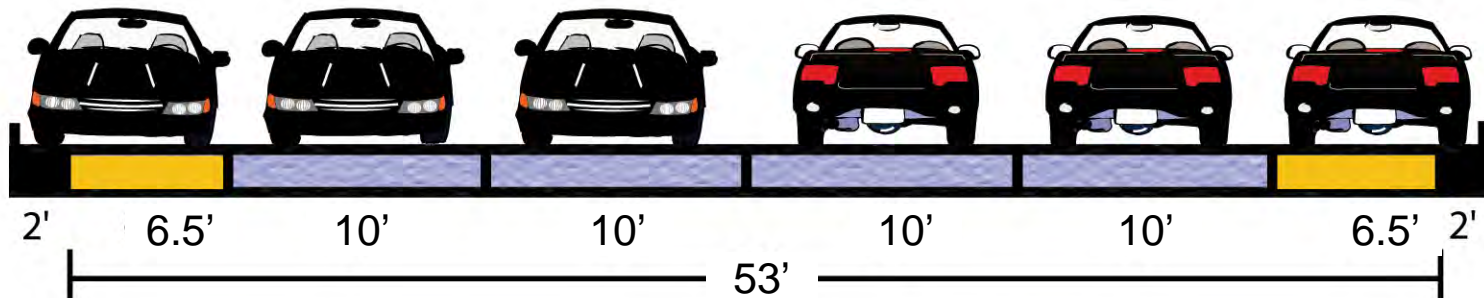


- Focused on Edgewater Dr
 - Village Center Vision
 - Beautification
 - Pedestrian Friendly
 - Bicycle Friendly
 - Less Speeding
 - City Control of Road

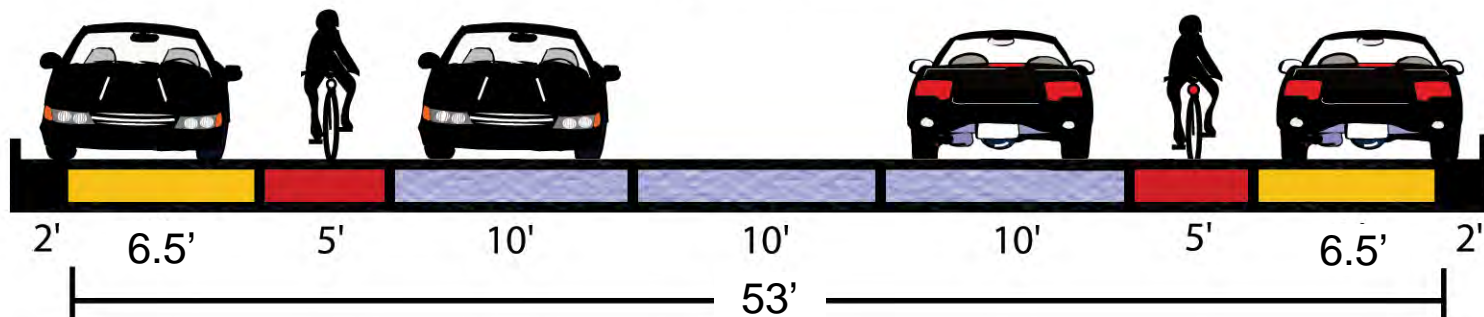


Classic Road Diet

PREVIOUS CROSS SECTION



ROAD DIET



**Only Resource at the time -
Burden & Lagerway (1999).
Road Diets Fixing the Big Roads**

Project Opportunity



- Edgewater Drive was shown to be resurfaced by FDOT in the Metropolitan Planning Organization's Transportation Improvement Program (TIP)
- Early Mainstreet Organization requested the City to study a potential road diet



Public Process

- Two public workshops plus presentations to the Neighborhood Association
- Synchro traffic analysis
- Neighborhood Association: favored
- Merchants Association: mixed support



Project Direction

- **City agreed to take over the road from FDOT**
- **City committed to a trial phase in temporary tape and to complete a before & after analysis**
- **Developed extensive Performance Measures**

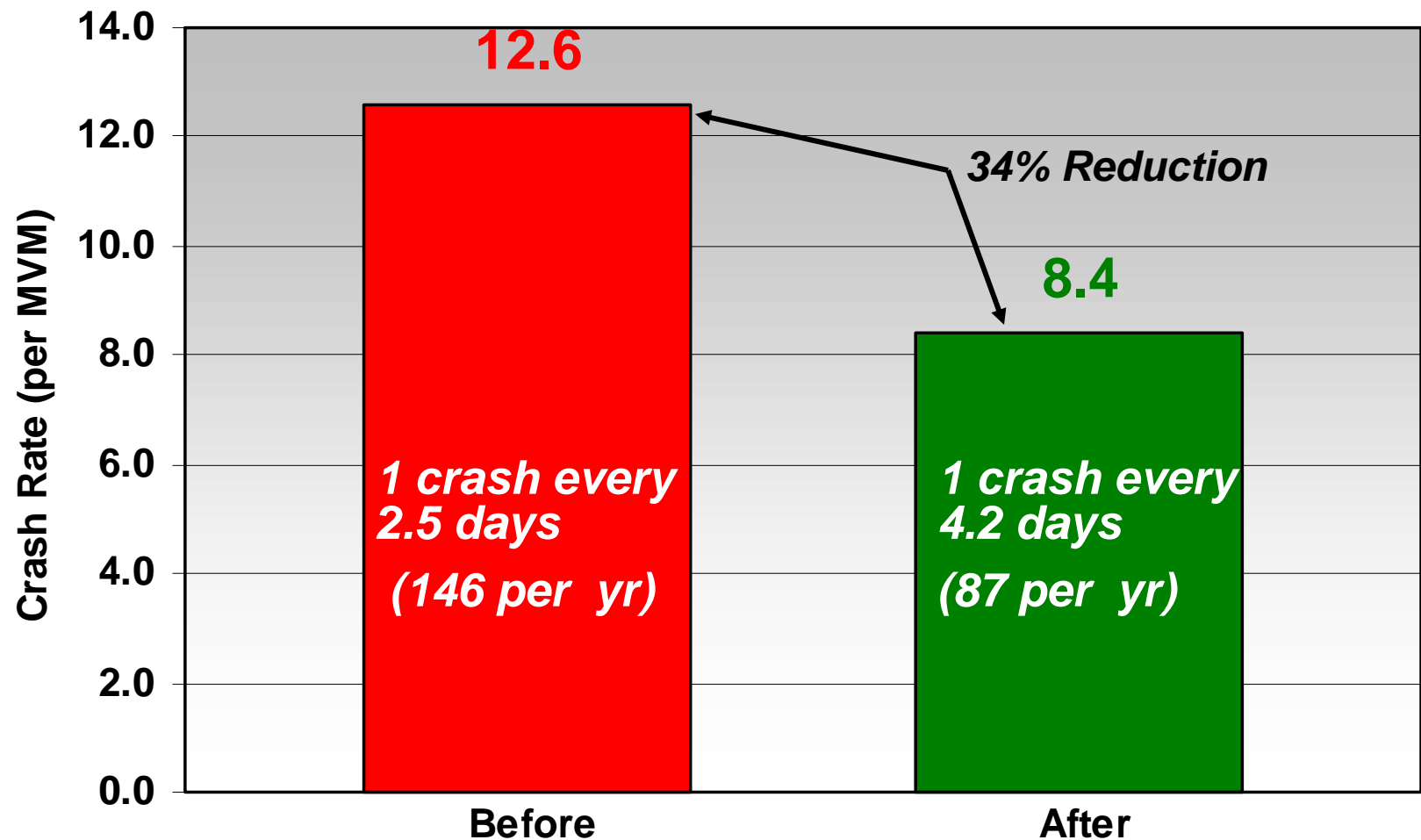
Before & After Re-Striping Evaluation Criteria

- **Crash Rate**
- **Injury Rate**
- **Speeding Analysis**
- **Edgewater Drive Traffic Volumes**
- **Parallel & Sidestreet Traffic Volumes**
- **On-Street Parking Utilization**
- **Pedestrian Volumes**
- **Bicycle Volumes**
- **Corridor Travel Times**

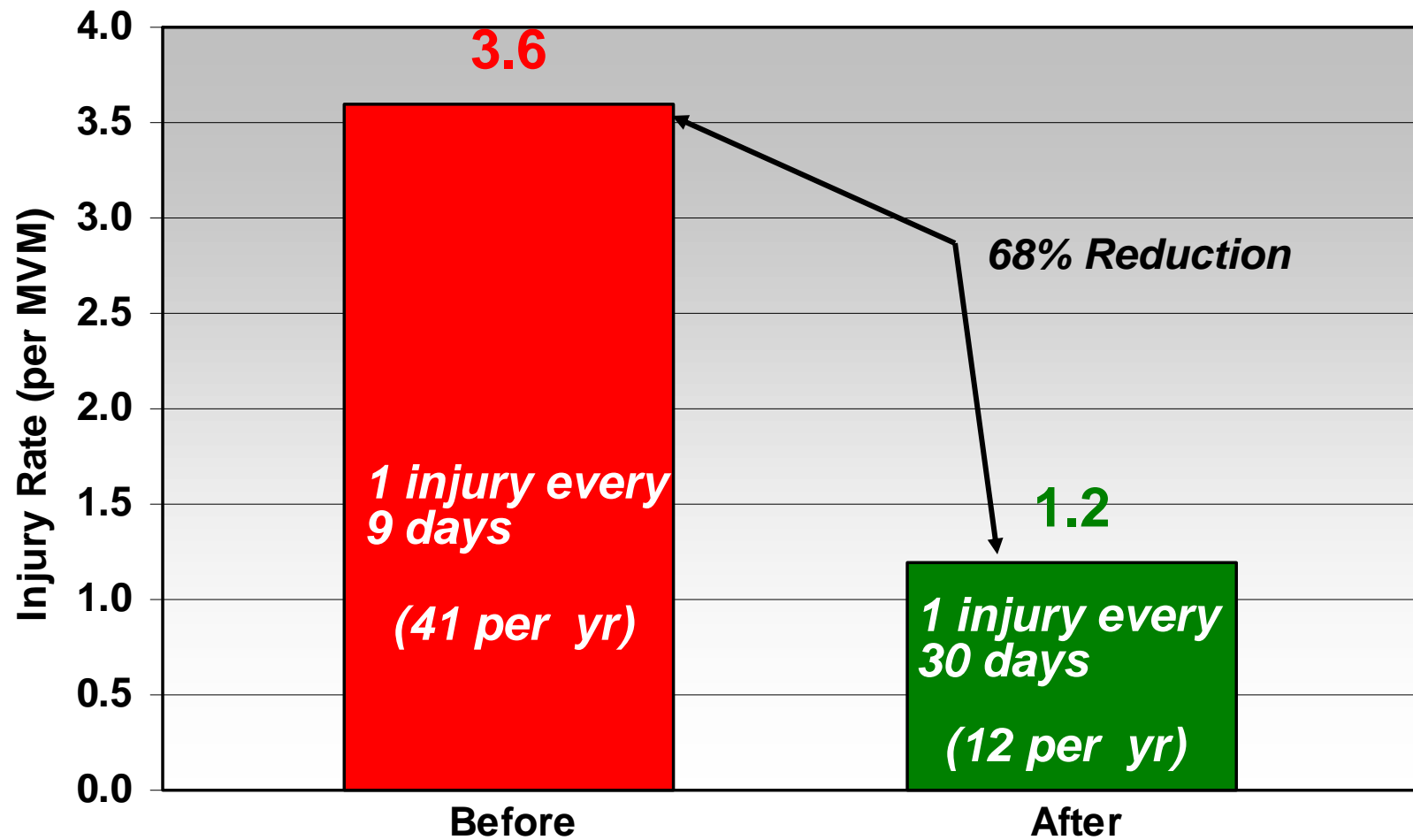
Project Outcomes

- Resurfaced in May 2002 & collected four months of after data
- Presented results at public meetings
 - Residents - consensus for support
 - Merchants – no strong consensus – a few rallied to fight it
 - Data supported the project goals

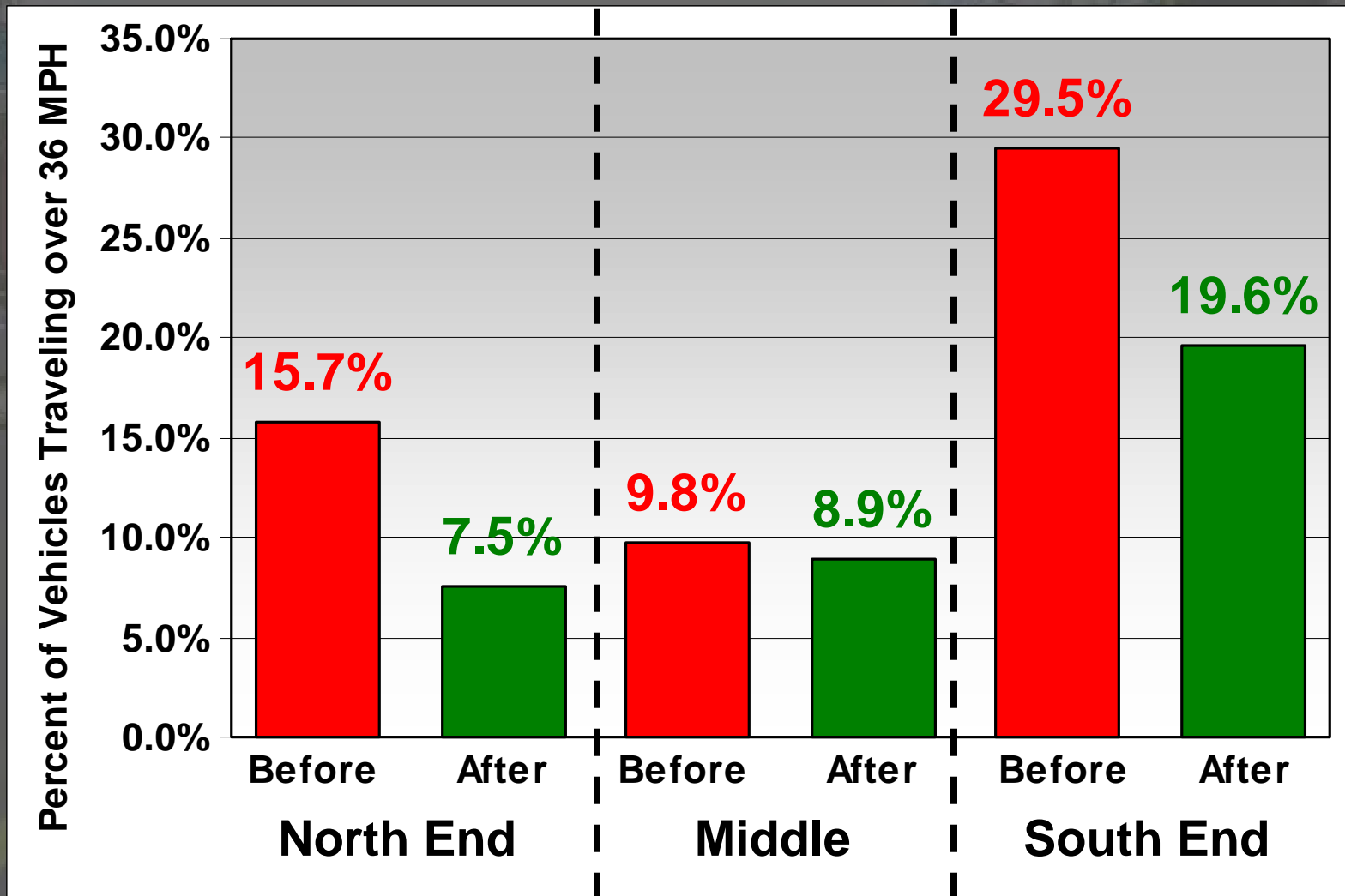
Crash Rate



Injury Rate

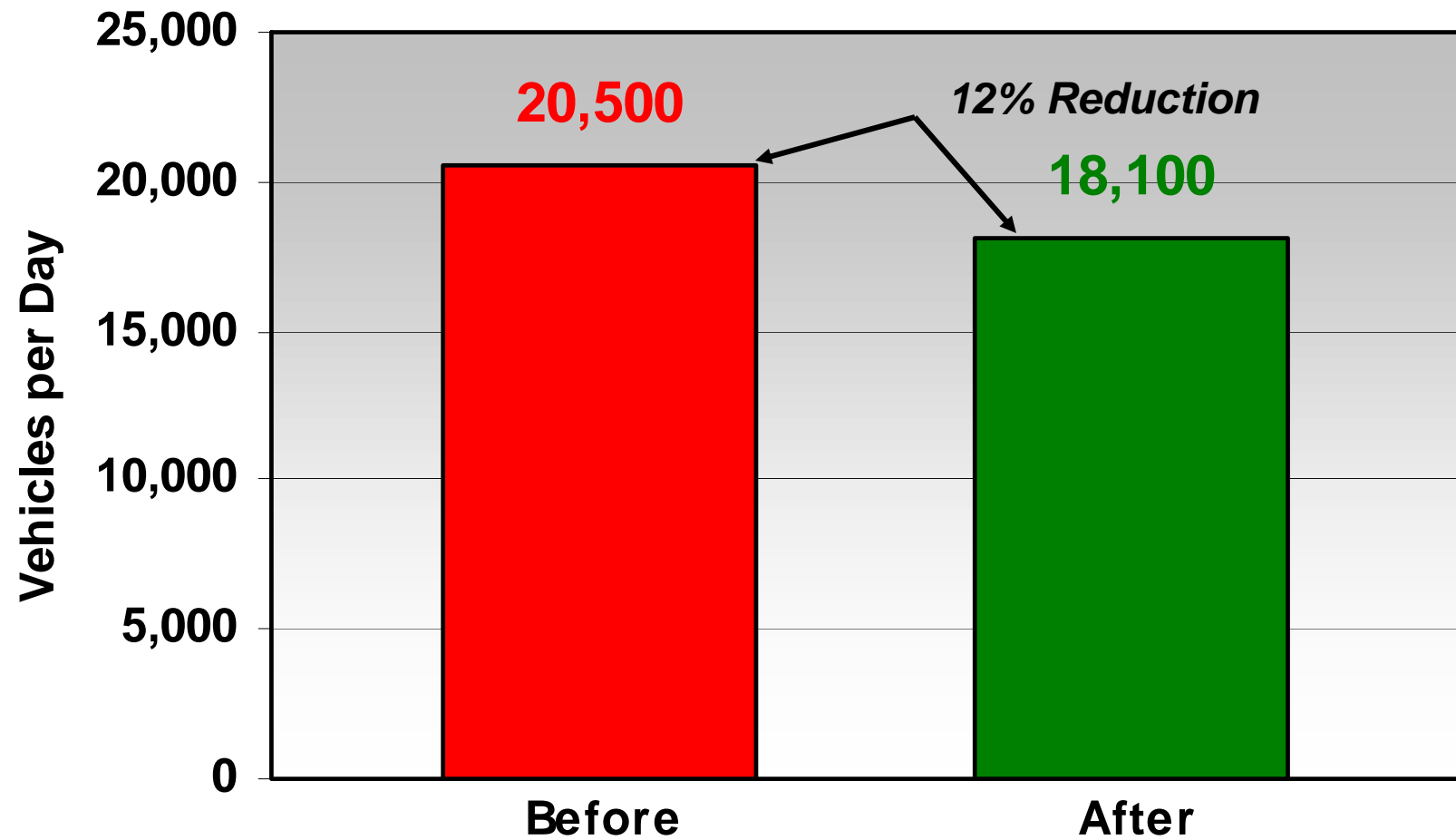


Speeding Analysis

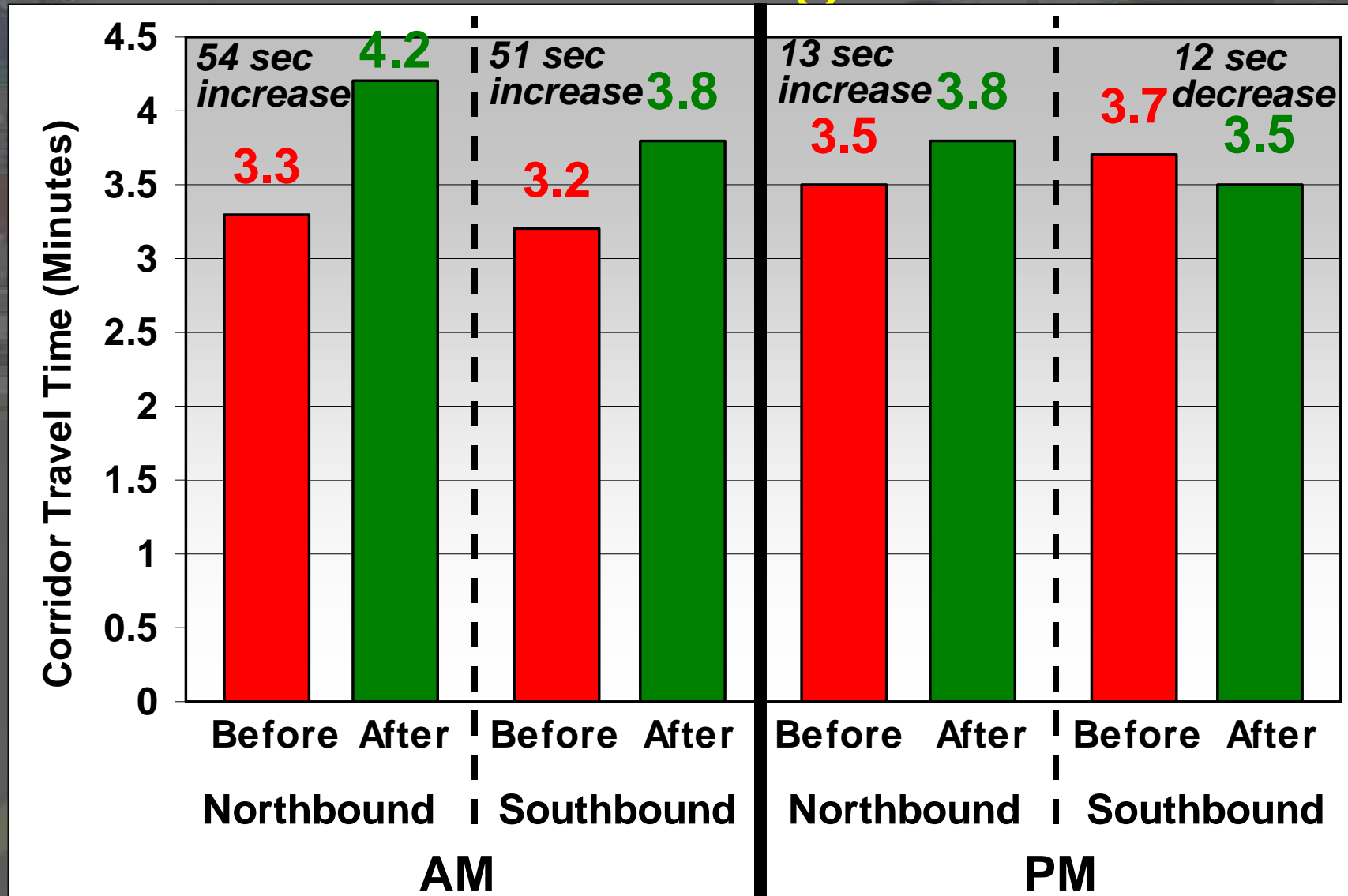


- Speed Limit is 30 MPH

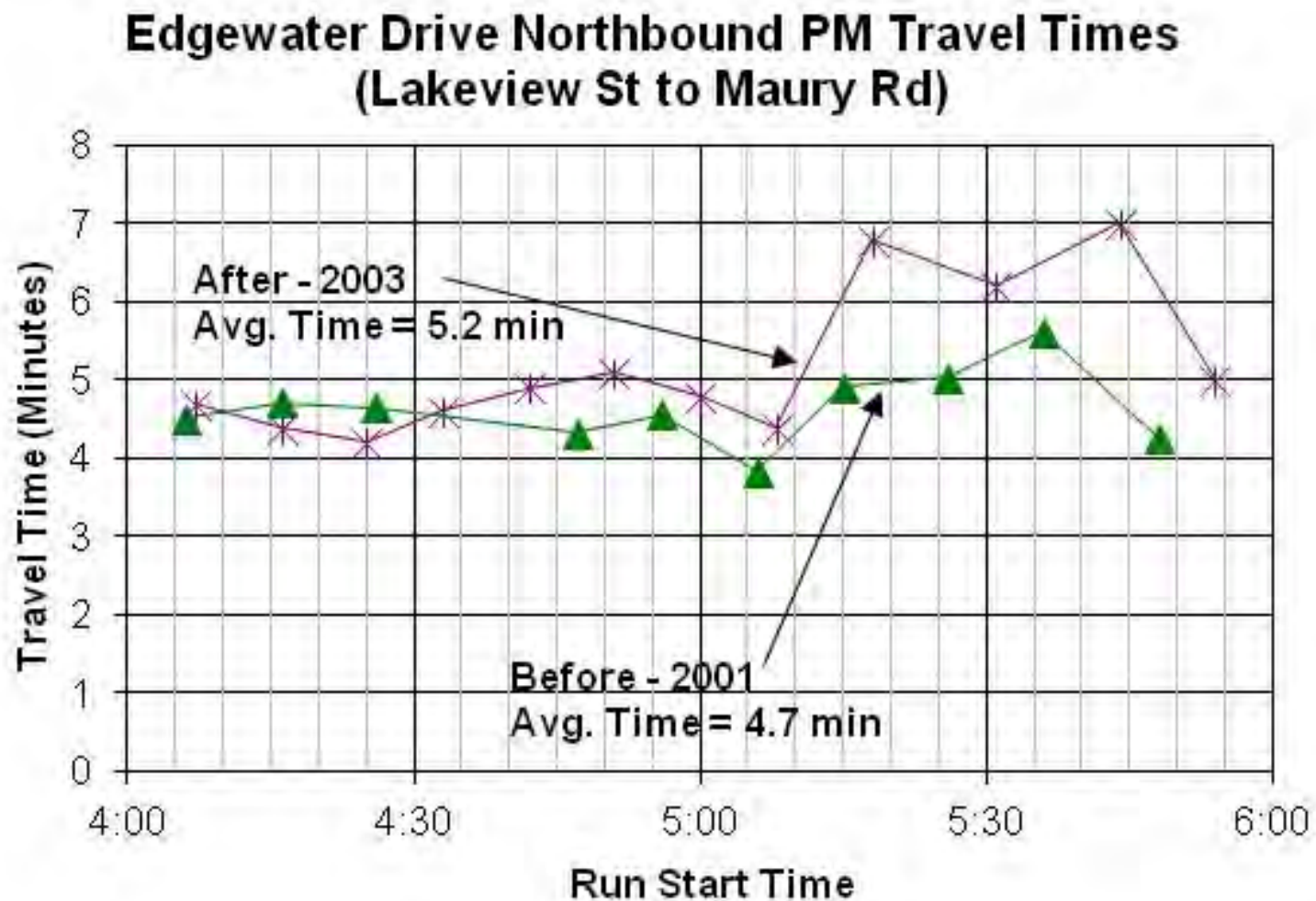
Edgewater Dr Traffic Volumes



Corridor Travel Times prior to Retiming



Travel Time Graphing



- After data collected in final 2003 condition with signal retiming

Evaluation Matrix

Measure of Effectiveness	Result	Did the Re-Striping Accomplish the Objective?
Avoid Increasing Traffic On Neighborhood Streets	Overall 4% Reduction - Two Streets Had Significant Increases	YES
Reduce Speeding on Edgewater Dr	1% to 10% Reduction in percent excessively speeding based on location	YES
Increase Bicyclist Volumes	30% Increase	YES
Increase Pedestrian Volumes	23% Increase	YES
Reduce Crashes	34% Decrease	YES
Increase On-Street Parking Use Rates	41% Increase	YES
Increase Pedestrian Satisfaction (Residents)*	71% felt crossing difficult before 55% felt crossing difficult after	YES
Increase Pedestrian Satisfaction (Merchants)*	No Change	NO
Increase Parking Satisfaction (Residents)*	28% felt comfortable before 47% felt comfortable after	YES

* Satisfaction results were qualitative and based on returned comment forms

Project Outcomes

City Placed Permanent Striping in the December 2002



Project Outcomes



**Road was resurfaced again in 2012 –
no one suggested to go back to 4
lanes – Public accepts it as a given**

Lessons learned while Dieting

- Research – today there are extensive studies and documentation
- Analysis – simulations = powerful tool
- Traffic Signal Spacing limited capacity
- Public awareness key
- Public Surveys & Comments – nonscientific survey method used to receive comments – careful not to give the impression there is a vote
- Political support & timing is key

Results – Ten Years After



7 Story Mixed Use Project Complete

Results – Ten Years After



Photos courtesy of Orlando Main Streets

Active Main Street Association

Results – Ten Years After

Summary of Taxable Values						
Parcels Included	Taxable Value in Millions			Percent Change in Taxable Value		
	Year 2000	Year 2006	Year 2012	2000-2006	2006-2012	2000-2012
Parcels Adjacent to Edgewater ¹	\$ 39	\$ 59	\$ 70	50%	20%	80%
All Parcels within 1/2 mile of Edgewater	\$ 460	\$ 764	\$ 782	66%	2%	70%
Single Family Residential within 1/2 mile of Edgewater	\$ 314	\$ 562	\$ 557	79%	-1%	77%
Orange County ²	\$ 51,569	\$ 92,266	\$ 81,436	79%	-12%	58%
<p>1. The 7 story mixed use project, The Wellesley, was completed post 2006 Tax Values.</p> <p>2. Orange County parcels includes the development of properties throughout the County.</p>						

Results – Ten Years After



College Park Business District is thriving – 77 net new businesses & 560 new jobs since 2008

Results – Ten Years After



Edgewater Drive to the north of the segment (four divided & five lane) was resurfaced by FDOT and lanes were narrowed to create bike lanes

Results – Ten Years After



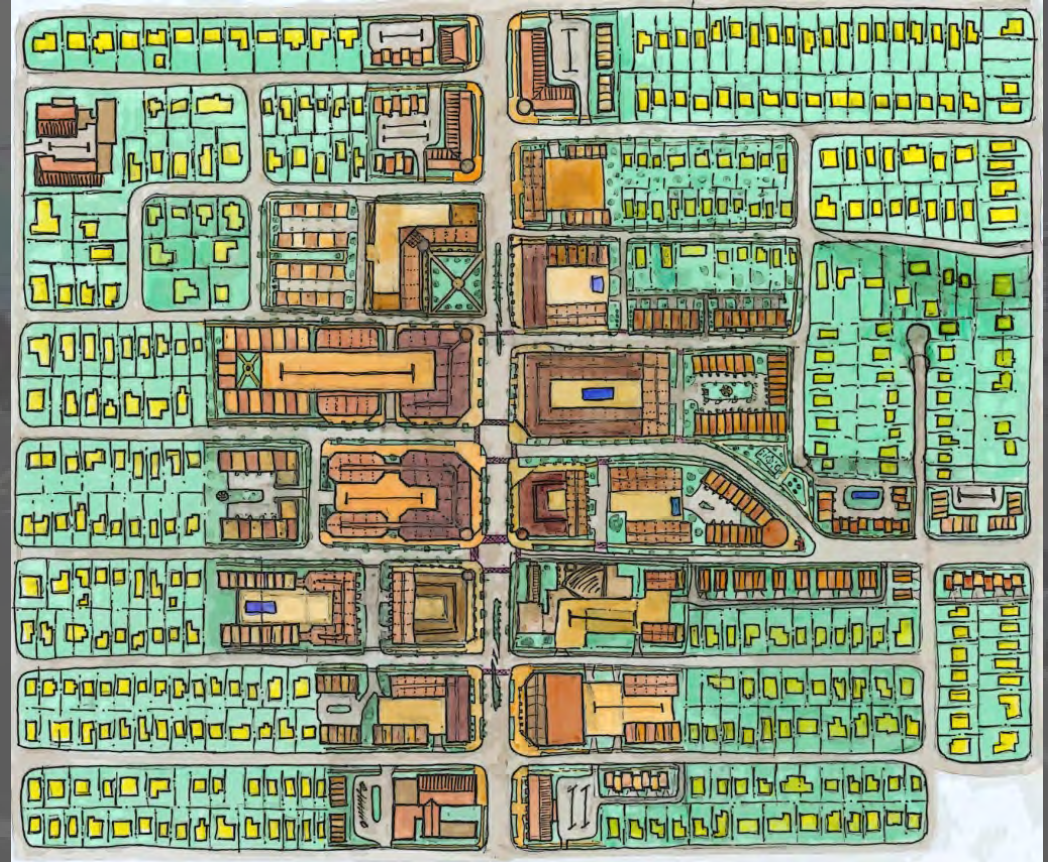
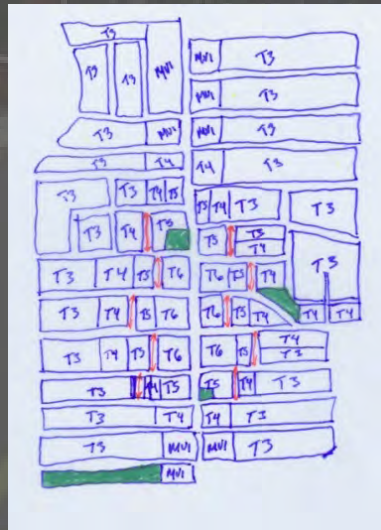
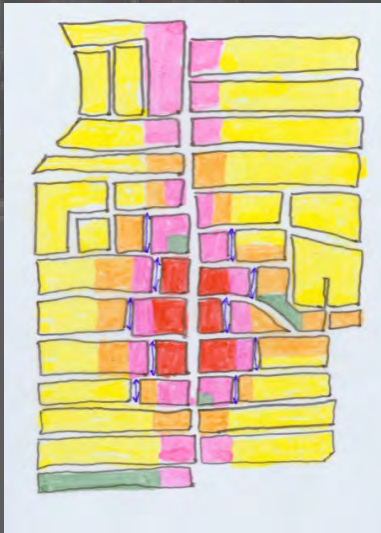
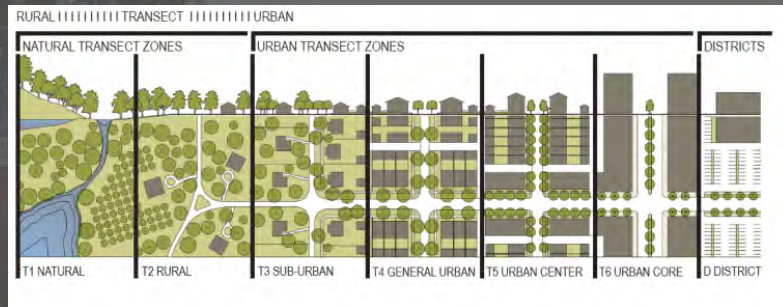
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Results – Ten Years After



**Edgewater Vision Task Force – Completed
a Special Plan in 2008**

Results – Ten Years After



City Council Adopted the Special Plan Overlay – Includes use of transects – prepared for infill redevelopment

Results – Ten Years After



**Streetscape & ADA upgrades are needed
– current streetscape is 20 years old**

Results – Ten Years After



Bicycle lanes are well used but some cyclists that prefer to take the lane are concerned about dooring

Results – Ten Years After



Pedestrian activity is high along the corridor & the ADT has increased back from 18,000 to 20,000

Results – Ten Years After



Parallel Street that saw an increase in volumes now has traffic calming & has dropped back to its previous level

Results – Ten Years After

Bike & Pedestrian Crashes Remain Down

Bicycle & Pedestrian Crashes		
Performance Measure	Before ¹	After ²
Crashes Involving Bicyclists	3	2
Crashes Involving Pedestrians	3	1
Notes:		
1. Before represents an average of Years 1999, 2000 & 2001 for Pedestrians and 2000 & 2001 for Bicycles (4 lanes)		
2. After represents average of Years 2004 - 2010		

Results – Ten Years After

Crash & Injury Rates Remain Down

Crash & Injury Rate Comparison			
Statistic	Before ¹	After ²	% Change
Crash Rate (per MVM) ³	12.6	7.0	-45%
Injury Rate (per MVM)	3.6	2.0	-44%
Notes:			
1. Before represents an average of Years 1999, 2000 & 2001			
2. After represents average of Years 2004 - 2010			
3. MVM = Million Vehicle Miles			

Results – Ten Years After



2013

Thank You



2013